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AMOUNT OF WATER BROUGHT TO CHICKS BY MALE *PTEROCLES SENGALLUS* IN HIS BELLY FEATHERS

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Members of the family Pteroclididae, a group of desert inhabiting birds, are known to fetch water in their belly feathers to chicks. Cade and Maclean (1967) have shown the highly specialized nature of the ventral feathers, particularly that of the barbules and how well they are adapted for holding water, in all the 14 species of *Pterocles*. By making measurements on dead specimens and pieces of belly skin and plumage they found that a male sandgrouse can absorb from 25 to 40 ml of water in his ventral plumage and estimated that the bird can deliver from 10 to 18 g of water for a distance of 32 km. No report on the actual amount of water thus brought to chicks by adult exists to my knowledge.

I had the opportunity of obtaining male *Pterocles senegallus* (Linnaeus) the Asian Spotted Sandgrouse with soaked belly feathers which had apparently just arrived for watering the chicks. Shortly after landing the bird was shot at 0930 on 5 July 1974 in Kiteban desert. The ventral feathers were so drenched with water that it was in one mass (Fig. 1). To ascertain the amount of water held in the belly feathers immediately we returned to the Museum without waiting for finding out the chicks. Within the next hour, it took 45 minutes to drive back, the wet ventral feathers were removed from the body. Groups of wet feathers cut at their base were soon transferred to a plastic bag to prevent further loss by evaporation. Wet weight of feathers was 27·5 g, which after drying. three days in a close room (32-40°C), scaled 30 g. In other

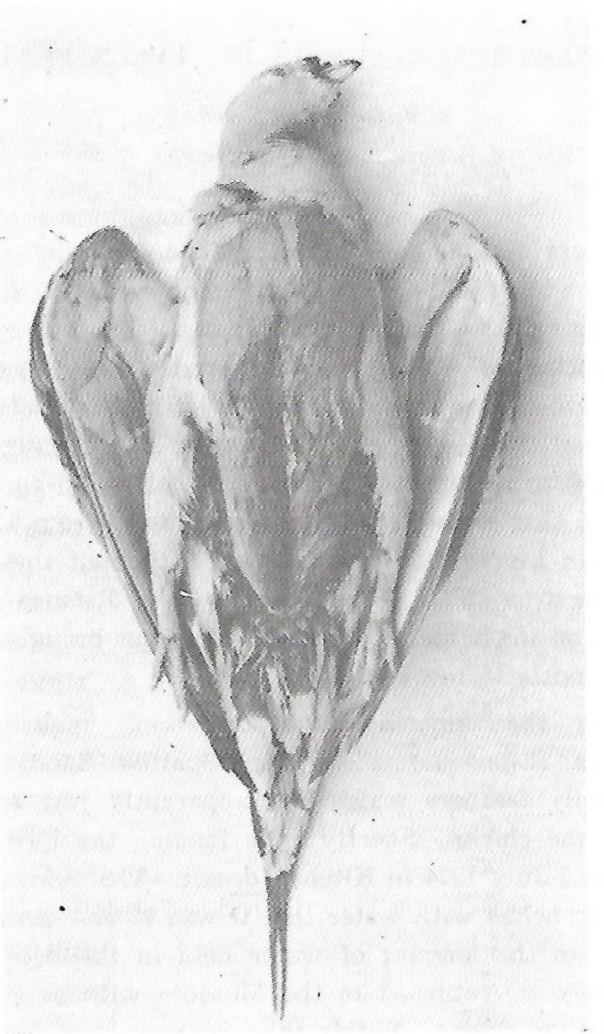

Fig. 1. Male *Pterocles senegallus* shot shortly after landing at 0930 on 5 July 1974 in Kiteban. Note the ventral feathers drenched with water.

words three grams of dry feathers contained 24·5 g. moisture content of water. 24·5 g of tapwater measured 25 ml. The bird with dry feathers weighed 263·5 g. The spot of collection was about 10 km (in a straight line) from the nearest known watering area.

In short the male *P. senegallus* held 24·5 of water (25 ml, 9·3% of its body weight) in his belly feathers for providing the chicks at the end of a flight covering 10 km from the watering area.

REFERENCE

Cade, Tom J . and Maclean, Gordon L. 1967. Transport of water by adult sandgrouse to their young. The Condor 69 : 323-343.

الخلاصة

اصطيد ذكر من نوع القطا المرقط الاسيوي في تموز ١٩٧٤ في صحراء كتيبان وكان يحمل في ريش البطن ٢٤٫٥ غم من الماء (مايعادل ٢٥ سم٣ ، اي ٩٫٣ ٪ من وزن الجسم) وذلك لتجهيز الصغار به بعد نقله مسافة ١٠ كم .